as I have already mentioned, did not expect that many more would be found. But by the time of the publication of Hooker's "Flora of New Zealand" (1863), a work which has been of inestimable value to our colonists, we find the number of indigenous plants described had been increased to 2456. Armed with the invaluable guidance afforded by Hooker's "Handbook," our colonial botanists have renewed the search, and have since then discovered 1469 new species, so that our plant census at the present date gives a total of 3355 species. It would be impossible to make mention of all who have contributed to this result as collectors, and hardly even to indicate more than a few of those to whom science is indebted for the description of the plants. The literature of our post-Hookerian botany is scattered about in scientific periodical literature, and, as Hooker's "Hand-book," is now quite out of print, it is obvious that, as the new discoveries constitute more than one-third of the total flora, it is most important that our young botanists should be fully equipped with all that has been ascertained by those who have preceded them. I am glad to be able to announce that such a work, in the form of a new edition of the "Hand-book of the Flora of New Zealand," approved by Sir Joseph Hooker, is now in an advanced state of preparation by Prof. Thomas Kirk, who has already distinguished himself as the author of our "Forest Flora." Mr. Kirk's long experience as a systematic botanist, and his personal knowledge of the flora of every part of the colony, acquired during the exercise of his duties as Conservator of Forests, point to him as the fitting man to undertake the task.

But quite apart from the work of increasing the local collections which bear on biological studies, New Zealand stands out prominently in all discussions on the subject of geographical biology. It stands as a lone zoological area, minute in area, but on equal terms as far as regards the antiquity and peculiar features of its fauna, with nearly all the larger continents in the aggregate. In consequence of this, many philosophical essays—such, for instance, as Hooker's introductory essay to the early folio edition of the "Flora," the essays by Hutton, Travers, and others, and also the New Zealand references in Wallace's works, have all contributed essentially to the vital question of the causes which have brought about the distribution and geographical affinities of plants and animals, and have thus been of use in hastening the adoption of the doctrine of evolution. But much still remains to be done. Both as regards its fauna and its flora, New Zealand has always been treated too much as a whole quantity, and in consequence percentage schedules prepared for comparing with the fauna and flora of other areas fail from this cause. It is absolutely necessary to discriminate not only localities, but also to study more carefully the relative abundance of individuals as well as of species before instituting comparisons. The facility and rapidity with which change is effected at the present time should put us against rashly accepting species which may have been accidental intruders, though wafted by natural causes, as belonging to the original endemic fauna or flora. Further close and extended study, especially of our marine fauna, is urgently required. We have little knowledge beyond the littoral zone, except when a great storm heaves up a gathering of nondescript or rare treasure from the deep. Of dredging we have had but little done, and only in shallow waters, with the exception of a few casts of the deep-sea trawl from the *Challenger*. When funds permit, a zoological station for the study of the habits of our sea fishes, and for the propagation of such introductions as the lobster and crab, would be advantageous. I observe that lately such an establishment has been placed on the Island of Mull, in Scotland, at a cost of £400, and that it is expected to be nearly self-supporting. With respect to food-fishes, and still more with respect to some terrestrial forms of life, we, in common with all the Australian colonies, require a more scientific and a less casual system of acclimatization than we have had in the past. One must talk with bated breath of the injuries that have been inflicted on these colonies by the rash disturbance of the balance of nature. Had our enthusiasm been properly controlled by foresight, our settlers would probably not have to grieve over the losses they now suffer through many insect pests, through small birds and rabbits, and which they will in the future suffer through the vermin that are now being spread in all directions.

Sir James Hector then went on to say that there were many other points that he had intended to touch upon, but all had been forestalled by the remarks of His Excellency the Governor and Mr. Goodale. He was the better pleased that these gentlemen had spoken upon them, as they were remarks relating to the advantages of this Association. He felt, however, that he would like to have given a description of what had been ascertained relating to the geology of New Zealand. He might state that the early explorers appeared to have had only most vague ideas of the geologies of the countries they explored. Indeed, the whole science of geology seemed to have been almost brought into existence during the last fifty or fifty-five years. It existed only as drawing its knowledge from other branches of science; it barely existed as a science until these branches had become established. In New Zealand our geological explorations had been since the matters he had referred to had been settled, and the result had been that we had attained more rapidly, competent and tolerable, more complete knowledge of the structure of the country. New Zealand was probably the outcrop of a great earth-wave, the hollow of which formed the submarine plateau lying to the east. New Zealand appeared to have first originated as dry land in the Palæozoic times, merely as volcanic islands rising in a sea of moderate depth. After the Palæozoic period there appeared to have been a great blank in the geological formation. It was a period during which no deposits took place, and it was probable that all which had been deposited was removed. He went on to trace the various formations, referred to the first traces found of the moa at Timaru, and then leaving that subject stated that at the sectional meeting on ethnology there would be presented to the Association the first proof-sheets of a great lexicon of the languages spoken in the Pacific Islands, especially by the natives of the Sandwich Islands, of Tonga, and of New Zealand. It was being prepared by Mr. Tregear, one of the most profound workers in New Zealand in Maori mythology.

There was another subject on which he would like to touch. It was concerning the great Antarctic continent, but as he understood that Baron von Mueller wished the discussion of it should be deferred for Saturday forenoon, he would say no more upon it. He had to apologize for the very feeble manner in which he had attempted to discharge his duties, though he had the most perfect confidence in the success of the Association. He thought it was about twenty-four years since Mr. Travers got the Act passed which established the New Zealand Institute. In a small way it was an association of scientific men, and it was founded to absorb and render permanent the active endeavours in all parts of the colony to advance science. How well it had succeeded was known by all. Baron Von Mueller had kindly attributed its success to him, but he must really disclaim that, and say its success was due to the wise framer of the special Act. He hoped to see the colonies united together as one whole in this matter; the whole of the Australasian colonies were not too large to combine for the purpose, and he hoped that the inclusion of New Zealand in the magic circle would come about in time. In conclusion he expressed a wish that the visitors might have a pleasant sojourn in New Zealand; and trusted that he had succeeded in proving the claims of New Zealand as a place for the meeting of the Association, and that he had shown there was enough scientific work to merit such recognition as they had received; and he thought he had shown that New Zealand had great capabilities for scientific research, and that there was still a great deal to be done.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, March 12.—"On the Bisulphite Compounds of Alizarin-blue and Cœrulin as Sensitizers for Rays of Low Refrangibility." By George Higgs. Communicated by Lord Rayleigh, Sec.R.S.

The determination of the relative wave-lengths of the Fraunhofer lines, by photographing all the orders of spectra given by any particular grating, includes certain subjects which present more or less difficulty, and that of selecting or producing a dye-bath adapted to the requirements of the two or more orders comprising the subject is intimately connected with that of the choice of absorbing media.

Having been engaged for some time in investigations of this nature, I had occasion, during the summer of 1889, to require an impression of the second order, about w.l. 3300, contiguous with that of the red end of the first order; and finding that the ordinate of an actinic curve for a plate immersed in a very dilute alcoholic ammoniacal solution of cyanin (1 : 30,000), reduced to about one-fourth of that for an unprepared plate, I abandoned its use for this purpose. The results appeared to be unaffected by the addition of quinine.

Subsequently, induline, cœrulin, alizarin-blue, and the bisulphite compounds of the two latter were used, and when obtained in a state of sufficient purity the alizarin-blue S leaves little or nothing to be desired, for, whilst possessing, in a high degree, sensitizing properties for rays throughout the region comprised between w.l. 6200 and 8000, it does not, like cyanin, lower the sensitiveness to the violet and ultra-violet.

The following is one of the processes I employed in the preparation of the dye-stuff in a pure state :—

To a saturated solution of sodium bisulphite in a mortar is added alizarin-blue paste, this is disintegrated with a pestle, and poured into a glass vessel capable of holding an additional quantity of sodium bisulphite, in all 10 parts of the paste to 20 parts of bisulphite, and another 10 parts of water. The vessel is well stoppered, set aside in a cool place for five or six weeks, and shaken daily, but left undisturbed during the last eight or ten days.

The solution is decanted, filtered, and treated with alcohol, to precipitate the greater portion of the remaining sodium bisulphite. 50 parts of water are now added with a sufficiency of sodium chloride to form a concentrated solution. Again set aside in an open-mouthed glass jar, covered with bibulous paper, for seven or eight days, a deposition of the dye in a crystalline state, together with sulphite of calcium, will take place, which latter, owing to its insolubility in water, may be removed by filtration.

The alizarin-blue S is separated from any unaltered substance left in the original stoppered vessel by solution, and added to the brine, now purified from lime salts, and once more set aside to crystallize, the final purification being effected in a beaker containing alcohol and a small percentage of water to remove the last traces of sodium chloride, collecting the crystals on a filter-paper and drying at ordinary temperatures.

The needle-shaped crystals are of a deep-red. Dilute solutions are of a pale-sherry colour, changing, with the addition of a few drops of ammonia, to a green, which immediately gives way to magenta and every shade of purple, till oxidation is complete, when it assumes a blue colour, the absorption spectrum of which is continuous and strongest in the least refrangible end, presenting the appearance of extending into the infra-red.

Plates immersed in a solution containing 1 : 10,000 and 1 per cent. of ammonia give the most perfect results the day after preparation, but rapidly deteriorate unless kept quite dry.

With a slit 1/1000 inch in width, and an exposure of forty minutes, results have been obtained in the region of great A of the second order which possess all the detail and definition usually so characteristic of the violet end. Numerous lines are sharply depicted which were previously not known to exist. W.l. 8400 has been reached, giving almost equal detail.

The process for the preparation of pure cœrulin S is a slight modification of the preceding. The results obtained, as well as the actinic curve, are almost identical. The pure substance is almost white ; dilute solutions pass rapidly from pale yellow to a bright green ; a trace of ammonia produces an olive-green.

For several samples of paste I am indebted to the kindness of Messrs. Schott, Segner, and Co., of Manchester, agents to the Badische Anilin- und Soda-Fabrik, Ludwigshafen, who hold the patent rights for the manufacture of alizarin-blue S. It is hoped this company may be induced to manufacture this substance free from the minute crystallizable impurities which render it unsuitable for use in investigations of such delicate nature.

Geological Society, March 11.—Dr. A. Geikie, F.R.S., President, in the chair.—The following communications were read :—Manod and the Moelwyns, by A. V. Jennings and G. J. Williams. The area described by the authors is on the north side of the Merionethshire anticlinal of Lower Cambrian rocks, and contains Lingula Flags, Tremadoc, and Arenig rocks. The authors correct what they think is an inaccuracy of some importance in the correlation of beds in different parts of the range, as interpreted in the map and memoir of the Geological Survey, and trace with greater completeness the position and constancy of the beds of slate in the Arenig series—a point of considerable local and practical importance to those engaged in slate-quarrying. They offer also what seems to them to be conclusive evidence to show the intrusive nature of the great crystalline mass known as the syenite of Tan-y-Grisiau, and to its intrusion are due, in their opinion, the peculiar physical characteristics of the surrounding country. Though in the immediate neighbourhood of Festiniog there is no direct evidence of unconformity between the Tremadoc and Arenig series, it seems probable that an unconformity does exist ; for when traced toward the west the Tremadoc beds thin out and the Lingula Flags are overlain by graptolite-bearing slates of Arenig age, while eastward, near Llyn Serw, the grit comes close upon Upper Lingula Flags. The division of the Arenig volcanic rocks into Lower Ashes, Felstone, and Upper Ashes, while true of some districts and useful as a generalization, conveys an idea of uniformity of strata all round the anticlinal which more detailed examination of different districts does not support. After the reading of this paper there was a discussion, in which Prof. Hughes, Dr. Hicks, Mr. Sherborn, and the President took part.—The Tudor specimen of *Eozoon*, by J. W. Gregory.

Zoological Society, March 17.—Prof. G. B. Howes in the chair.—Mr. Sclater exhibited and made remarks on some horns with scalps attached of an Antelope sent to him from Somali-Land by Captain H. G. C. Swayne, R.E., which he referred to the lately described *Cervicapra clarkii* of Mr. Oldfield Thomas. —Mr. Sclater also exhibited two skins of the Ounce (*Felis uncia*) in reference to the specimen of this Cat lately acquired by the Society, and made some remarks on the geographical range of the Ounce in Central Asia.—Mr. A. Smith Woodward gave an account of some dermal plates of *Homosteus* from the Old Red Sandstone of Caithness, lately sent to him by Mr. Donald Calder, of Thurso, the examination of which had enabled him to advance our knowledge of some points in the structure of this remarkable form of extinct fishes.—Mr. G. A. Boulenger gave a detailed description of Simony's Lizard (*Lacerta simonyi*) from the large specimen lately living in the Society's Gardens, which had been brought from the rock of Zalmo, Canaries, by Canon Tristram. —Mr. W. F. Kirby gave an account of a small collection of Dragon-flies made by Mr. E. E. Green in Ceylon. The series contained examples of sixteen species, of which three appeared to be new to science.—Mr. Oldfield Thomas read some notes on the specimens of Antelopes procured by Mr. T. W. H. Clarke in Somali-Land, which had been submitted to his examination by Messrs. Rowland Ward and Co. The specimens were referred to eight species. One of these, already preliminarily described as *Cervicapra clarkii*, was now regarded as constituting a new generic form allied to the gazelles, and proposed to be called *Ammodorcas clarkii*.

Royal Microscopical Society, March 18.—Dr. R. Braithwaite, President, in the chair.—A letter from Colonel O'Hara, dealing with sundry points connected with photomicrography, was read.—Mr. E. M. Nelson exhibited and described a new design of student's microscope recently brought out by Mr. Baker, the idea of which was to provide a microscope of this class, fitted with some of the more important accessories usually only applied to instruments of an expensive character. It had a good coarse adjustment, a differential fine adjustment, a centring sub-stage with rack-work, and a Wright's finder. The stage was of the horseshoe shape, and solid and well made, so that the instrument answered to the description of it as a cheap microscope, capable of doing all ordinary microscopic work.—Mr. T. Charters White read a paper on a new method of demonstrating cavities in dental and osseous tissues, and exhibited specimens in illustration.—Mr. E. M. Nelson exhibited an enlargement of a photomicrograph.—Mr. E. M. Nelson read a paper on the optical principles of microscope bull's-eyes, illustrating the subject by drawings on the black-board.—Mr. Mayall read a communication from the authorities of the Antwerp Microscopical Exhibition to be held during August and September next.—Prof. Bell announced that the President and the Rev. Dr. Dallinger had been appointed delegates to represent the Society at the forthcoming International Congress of Hygiene.—The President announced that the next *conversazione* would be held on Thursday, April 30.

Linnean Society, March 19.—Special General Meeting.—Prof. Stewart, President, in the chair.—The Secretary having read the minutes of the last meeting, the President announced that the sense of the meeting would be taken by ballot on the proposed alteration of certain bye-laws, of which due notice had been given as prescribed by the charter of the Society ; and after explaining the nature and object of such alterations, he invited those present to express their opinions. A discussion followed, in which twenty-two of the Fellows took part, and on the votes being counted it was found that a portion only of the proposed alterations were assented to, the remainder being negatived by 40 to 29.—The following papers were then read :—Researches on earthworms belonging to the genus *Lumbricus*, by the Rev. H. Friend.—The Hemiptera and Heteroptera of Ceylon, by W. F. Kirby.

CAMBRIDGE.

Philosophical Society, March 9.—Dr. Lea in the chair.—The following communications were made:—Observations upon the cerebral heat centres, by Mr. J. G. Adami.—On the nature of supernumerary appendages in insects, by Mr. W. Bateson. The author exhibited a number of specimens in illustration of this subject. The evidence related to about 220 recorded cases of extra legs, antennæ, palpi, or wings, and particulars were given as to the mode of occurrence of these structures. Speaking of cases in which the nature of the extra parts could be correctly determined, it was found that the following principles were followed (amongst others):—I. Extra appendages arising from a normal appendage usually contain all parts found in the normal appendage peripherally to the point from which they arise, and never contain parts central to this point. II. A. Extra appendages of double structure are the commonest. (1) Whether separate or in part compound, they consist of a pair of complementary parts, one being right and the other left. (2) Of the two extra appendages, that which is adjacent to the limb from which they arise, is a limb of the other side of the body. (3) If the pair of extra appendages arise from the anterior surface of the normal appendage, the surfaces which they present to each other are structurally posterior; if they arise posteriorly, the adjacent surfaces are anterior; if they arise ventrally, the adjacent surfaces are dorsal, &c. II. B. A single extra appendage is rarely perfect. (1) If it arises from the body, it is formed as an appendange of the side on which it is placed. (2) If it arises by peripheral division of an appendage, the parts central to the point of division are commonly right or left as the case may be, while the peripheral part may be a symmetrical and complementary pair. It was pointed out that these phenomena are important as an indication of the physical nature of bodily symmetry, and in their bearing upon current views of the character of germinal processes. The author expressed his indebtedness for information, or the loan of specimens, to Messrs. H. Gadeau de Kerville, Pennetier, Giard, Kraatz, L. von Heyden, Dale, Mason, Westwood, Waterhouse, N. M. Richardson, Janson, Reitter, &c., and especially to Dr. Sharp for much help and advice in examining the specimens.—On the orientation of *Sacculina*, by T. T. Groom.—Some experiments on blood-clotting, by Albert S. Grünbaum. The author described the results of six experiments in which the cœliac and mesenteric arteries were ligatured. He finds that the effects of the ligature on the clotting of blood removed (after an interval of four hours) from the body is less pronounced than has been stated by Bohr (*Centralb. f. Physiol.*, 1888, s. 263). The clotting was slightly delayed, in one case by twenty minutes, but in the others by a few (three to four) minutes only. The clots, when formed, were less firm than normally. Bohr has stated that, in two experiments conducted as above, the clotting of blood was delayed for about two hours.

EDINBURGH.

Royal Society, March 2.—Sir Douglas Maclagan, President, in the chair.—Dr. Alexander Buchan read a paper on the relation of high winds to barometric pressure at Ben Nevis Observatory. The Observatory at the top of Ben Nevis is exposed to winds from all quarters, while the Observatory at the foot of Ben Nevis is well sheltered from all winds. It is found that the variations of barometric pressure at the high-level Observatory are practically proportional to the speed of the wind throughout a range varying from zero speed to a speed of 110 miles per hour. The difference is practically proportional to the square of the speed of the wind, which agrees with the well-known result regarding the reduction of pressure in the interior of a moving fluid.—Dr. A. Bruce read notes on a case of cyclopia in a child. There was a single median lozenge-shaped ocular cavity furnished with two upper and two lower eyelids. The nose was represented by a short pedunculated process of skin and subcutaneous tissue attached to the skin of the forehead above the median eye. On microscopic section, two rudimentary eyes were found, the two retinæ of which evidently arose from a single optic vesicle. The brain was nearly normal below the cerebrum, which was imperfectly divided into two membranes, and contained only a single ventricular cavity. The two optic thalami were fused together, apparently in consequence of the pressure of thickened membranes around them, which was considered to be the probable cause of the deformity. The premaxillary and ethmoid bones, the vomer and turbinated bones, and the pre-sphenoid were absent.—Dr. Byron Bramwell read a paper on cases illustrating the position of the visual centre in man. He first referred to the experimental investigations of Ferrier, Munk, Schäfer, and other observers, and emphasized the difficulty of determining the exact position of the visual centre by experiments on the lower animals. He then quoted Ferrier's analysis of the recorded cases of lesion of the visual centre in man; and finally detailed some cases which had come under his own observation which have important bearings on the subject. In the first case the patient was seized, two and a half years before her death, with symptoms indicative of cerebral embolism. From the presence of right-sided homonymous hemianopsia, the author diagnosed an embolic enfarction of the left posterior cerebral artery, with resulting softening of the left occipital lobe—probably the cuneus and adjacent white matter. The hemianopsia, which was complete, which passed just outside the fixing-point, and which affected light, form, and colour, persisted absolutely unchanged until the patient's death from a second embolism of the right internal carotid artery, two and a half years after the first attack. A sharply-defined softening of the posterior and inferior part of the cuneus and of the inferior occipital convolution was found after death. The angular gyrus was absolutely unaffected. The white matter of the occipital lobe was only involved to a limited extent from before backwards. Except in the top of the occipital lobe, the optic radiations were in no way directly implicated by the lesion. The author claimed that the case conclusively proved the presence of a half-vision centre in the top of the occipital lobe. In the second case a localized irritative lesion in the surface of the left occipital lobe produced flashes of light referred by the patient to the right eye, but in reality projected to the right side of the middle line (visual area corresponding to the left side of each retina). The third case was a typical example of sensory Jacksonian epilepsy, the left half of each retina being completely blind (right-sided homogonous hemianopsia). In the fourth case a localized softening beneath the left angular gyrus had produced temporary word-blindness and hemianopsia, the latter symptom being apparently due to arrested function in the optic radiations. A fifth case, still under consideration, was briefly referred to. In it complete right-sided hemianopsia, complete word-blindness, and temporary mind-blindness, without any other symptom whatever, had resulted from a sudden cerebral lesion, which was thought to be an embolism of the left middle cerebral artery, with resulting softening of the angular gyrus.—Prof. Crum Brown communicated a paper by Mr. F. Beddard on the anatomy of Ocnerodrilus (Eisen).

March 16.—Rev. Prof. Flint, Vice-President, in the chair.—Emeritus-Professor Blackie read a paper on bistratification in the living Greek language. The author asserts that modern Greek has been but slightly altered, since the time of Coraes, from classical Greek. The first thirty-one verses of the Gospel of St. John, as published in Athens in 1855, contain only nine departures from the classical type; while the corresponding portion of the Romaic version, published 200 years ago, contains twenty-eight. In the higher walks of Greek literature this purity of literary style is very marked. In thirty-one pages of Tricoupis' "History of the Greek War of Independence" (published in London in 1853), only fifteen deviations from the standard of ancient Greek appear; and in two chapters of Paspati's "History of the Capture of Constantinople by the Turks" (published in Athens in 1890), only ten deviations appear. The standard to which the author appeals is the Greek, not only of Plato and Xenophon, but of Diodorus, Lucian, Polybius, and Chrysostom. In the lower colloquial Greek of common life, very great divergence from classical literary style is evident. Thus, in the first twenty-six lines of the dialogues in a primer of colloquial Greek, published this year in Leipzig, thirty-three deviations from classical style occur. But, in even this lower form of Greek, very few words borrowed from other languages are found; and the accented syllable still remains as it was fixed by the Alexandrian grammarians.—Dr. John Murray read a paper, written by Mr. Robert Irvine and himself, on silica and siliceous formations in modern seas. There is great difficulty in accounting for the number of organisms which secrete silicic acid, and for the remains of such organisms which occur in the ocean and on the bed of the ocean. The amount of silicic acid which exists in solution in sea-water is far too small to account for the immense development of such organisms in various parts of the ocean. The authors have proved that clay and mud, carried down by rivers to the sea, are to be found in even the least disturbed parts of the ocean. And the diatoms can extract from these clays sufficient material for the formation of their siliceous sheaths. The authors have also proved that the suspending power of sea-water for such clays diminishes very markedly as the temperature rises. This appears to account for the great abundance of diatoms in the colder seas. —A communication, by Dr. W. G. Aitchison Robertson, on the relation of nerves to odontoblasts, and on the growth of dentine, was read.—Mr. A. Silva White read a paper, illustrated by a map, on the comparative value of African lands. The chief points dealt with in this paper are the relative value of African lands to the European Powers which control them; the progressive value of these lands from strategic bases on the coasts; and the lines of least resistance, and tracts of highest resistance, to European domination.

PARIS.

Academy of Sciences, March 23.—M. Duchartre in the chair.—The President announced the loss sustained by the Academy in the death of M. Cahours on March 17, and gave a short account of the life and works of this eminent chemist.—Action of heat on carbonic oxide, by M. Berthelot. It is known that carbonic oxide shows indications of decomposition at a red heat, with production of traces of carbon and carbon dioxide. A discussion of the facts leads M. Berthelot to the conviction that the phenomena are not due to the direct dissociation of carbonic oxide, but to molecular condensation, the condensed product separating into carbon dioxide and suboxides.—On a reaction of carbonic oxide, by the same author. In the course of researches on the preceding subject, M. Berthelot observed a characteristic reaction of carbonic oxide, due to its reducing action on an ammoniacal solution of silver nitrate. If bubbles of carbonic oxide, or an aqueous solution of it, be added to the nitrate solution, an abundant black precipitate appears upon boiling.—On the proper odour of earth, by MM. Berthelot and G. André. The authors have endeavoured to determine the origin of the odour which is so marked an emanation from vegetable mould after a fall of rain. They find that the essential principle resides in an organic compound of the aromatic family. Its odour is very penetrating, and analogous to that of camphors; its proportion in mould is only a few millionths, but one three-millionth of a gram is sufficient to produce a sensible smell. The new principle is neither acid, alkali, nor a normal aldehyde; its concentrated aqueous solutions may be precipitated by potassium carbonate, with the production of a resinous ring. When heated with potash, an acrid odour, analogous to that of the resin of aldehyde, is developed. It does not reduce ammoniacal silver nitrate. Under certain conditions—that is, by the employment of potash and iodine—iodoform is produced. This property is common, however, to many other substances, but the authors have not found furfurol, acetone, nor ordinary alcohol, although M. Muntz has stated that these bodies existed in some vegetable mould he examined.—Contribution to the biology of parasitic plants, by M. A. Chatin. The author contests the idea that parasitic plants nourish the hosts.—On the glycolytic power of the blood of man, by MM. R. Lépine and Barral. The glycolytic power is defined as the percentage loss of sugar which occurs when blood is kept for an hour in a water-bath at 38°–39° C. Determinations have been made of the glycolytic power of the blood of persons suffering from diabetes, pneumonia, and uræmia.—Observations of Millosevich's asteroid (304) made at Paris Observatory with the East Tower equatorial, by Mdlle. D. Klumpke. Observations for position were made on March 13 and 17.—On the theory of applicable surfaces, by M. J. Weingarten.—On the changes which are presented after imbibition in a system formed by the superposition of two thin, homogeneous, hygroscopic laminæ having different properties, by M. J. Verschaffelt.—On the action of hydroiodic acid on silicon chloride, by M. A. Besson. A part of the chlorine of silicon chloride has been replaced by iodine; the products obtained are described.—On the transformation of pyrophosphite of soda into phosphite, by M. L. Amat.—On bromo-nitrite salts of platinum, by M. M. Vèzes.—On the disaggregation of neutral amine salts by water, by M. Albert Colson.—New combinations of pyridine, by M. Raoul Varet.—On the theory of dyeing phenomena, by M. Léo Vignon.—On a method of simultaneously measuring the time of electrical excitation, and the resulting muscular contraction, by M. A. d'Arsonval.—On the action of phenic acid on animals, by MM. Simon Duplay and Maurice Cazin.—Actinometric observations made at the Observatory of the Petrowsky Academy, near Moscow, by MM. R. Colley, N. Michkine, and M. Kazine.—Some remarks on these observations, by M. Crova.

AMSTERDAM.

Royal Academy of Sciences, February 28.—Prof. van de Sande Bakhuyzen in the chair.—Mr. D. T. Korteweg discussed the spinodal and connodal curves of a surface having a slightly deformed conical point.—Mr. van Bemmelen showed two new compounds of mercuric oxide—a crystalline sulphate of mercury with one molecule of water, $HgO.SO_3.H_2O$, and a colourless basic sulphate, $(HgO)_3.(SO_3)_2.(H_2O)_2$, both obtained by Mr. C. Hensgen in the inorganic chemical laboratory of Leyden, during his researches on the chemical equilibrium between mercuric oxide and diluted sulphuric acid. He shows also that a homogeneous solution of chloride of antimonium, S_6Cl_3, in diluted sulphuric acid is separated into two layers of liquid by heating it to a certain temperature. The two layers disappear again by cooling. The temperature of the separation depends on the composition of the mixture. Mr. Hensgen is carrying on his researches on the subject.—Mr. L. M. J. Stoel, on the influence of temperature on the viscosity of fluid methyl chloride (communicated by Mr. Lorentz). Mr. Stoel has measured the transpiration times for a fixed volume of the liquid, the capillary tube being always the same. The pressure at one end was equal to that of the saturated vapour; that at the other end was greater by an amount which is measured by a column of mercury of a fixed height. The temperatures range from $-28°$ C. to $+123°$ C., the boiling-point being $-23°$, and the critical temperature $+143°$. The transpiration times (in seconds) may be calculated with a fair approximation by the formula

$$\log D = \frac{896 - T}{250},$$

T being the absolute temperature. The experiments were executed in the laboratory of Mr. Kamerlingh Onnes, at Leyden.

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